

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

The list of pending claims is presented below.

Claim 1. (Previously presented) A surface-modified lipoprotein-like oil-in-water emulsion having a lipophilic core surrounded by a monolayer of amphiphilic or polar lipids, in a non-ionic aqueous phase, the emulsion having a mean particle diameter of the oil phase of between 50 to 150 nm with at least 98% of the particles being between 50 to 250 nm, the lipophilic core containing at least one lipophilic agent or lipophilic derivative of a water-soluble agent which is diagnostically or therapeutically active or inactive, and the monolayer components including an emulsifier, a derivatized polyethylene glycol or polyethylene glycol-linked lipid, and a sterol.

Claim 2. (Previously presented) The oil-in-water emulsion of claim 1 wherein the lipophilic core comprises up to 50% (w/v) of the total emulsion composition.

Claim 3. (Previously presented) The oil-in-water emulsion of claim 2 wherein the lipophilic core comprises between about 10% and 40% (w/v) of the total emulsion composition.

Claim 4. (Previously presented) The oil-in-water emulsion of claim 1 wherein the at least one lipophilic or lipophilic derivative of a water-soluble agent is a pharmaceutically acceptable nonpolar lipid.

Claim 5. (Previously presented) The oil-in-water emulsion of claim 4 wherein the pharmaceutically acceptable nonpolar lipid is a triglyceride.

Claim 6. (Previously presented) The oil-in-water emulsion of claim 5 wherein the triglyceride is a biocompatible oil of animal or vegetable origin.

Claim 7. (Previously presented) The oil-in-water emulsion of claim 5 wherein the triglyceride is a synthetic or semi-synthetic lipid.

Claim 8. (Previously presented) The oil-in-water emulsion of claim 7 wherein the synthetic or semi-synthetic lipid is triolein.

Claim 9. (Previously presented) The oil-in-water emulsion of claim 7 wherein the triglyceride is a halogenated triglyceride.

Claim 10. (Previously presented) The oil-in-water emulsion of claim 1 wherein the lipophilic core comprises at least one pharmacologically inert nonpolar lipid and a contrast agent which is lipophilic or a lipophilic derivative of a water-soluble contrast agent.

Claim 11. (Previously presented) The oil-in-water emulsion of claim 10 wherein the lipophilic core comprises at least one pharmacologically acceptable inert nonpolar lipid and a contrast agent which is a halogenated triglyceride.

Claim 12. (Previously presented) The oil-in-water emulsion of claim 10 wherein the ratio of pharmacologically inert nonpolar lipid to contrast agent ranges from about 0.1:1.0 to 2:1 on a weight to weight basis.

Claim 13. (Previously presented) The oil-in-water emulsion of claim 12 wherein the ratio of pharmacologically inert nonpolar lipid to contrast agent is 1:1 on a weight to weight basis.

Claim 14. (Previously presented) The oil-in-water emulsion of claim 1 wherein up to 10% (w/v) of the emulsion is an amphipathic or polar lipid.

Claim 15. (Previously presented) The oil-in-water emulsion of claim 14 wherein the amphipathic or polar lipid is an emulsifier.

Claim 16. (Previously presented) The oil-in-water emulsion of claim 14 wherein the emulsifier is a natural, synthetic, or semi-synthetic phospholipid.

Claim 17. (Previously presented) The oil-in-water emulsion of claim **16** wherein the phospholipid is synthetic or semi-synthetic.

Claim 18. (Previously presented) The oil-in-water emulsion of claim **17** wherein the phospholipid is dioleoylphosphatidylcholine.

Claim 19. (Previously presented) The oil-in-water emulsion of claim **1** wherein up to 5% (w/v) of the emulsion is a sterol.

Claim 20. (Previously presented) The oil-in-water emulsion of claim **19** wherein the sterol is cholesterol.

Claim 21. (Previously presented) The oil-in-water emulsion of claim **19** wherein between about 0.4 to 0.5% (w/v) of the emulsion is a sterol.

Claim 22. (Previously presented) The oil-in-water emulsion of claim **21** wherein the molar ratio of cholesterol to emulsifier is between 0.05 to 0.70.

Claim 23. (Previously presented) The oil-in-water emulsion of claim **1** wherein the emulsion further includes a up to 5% (w/v) of an osmolality adjusting agent.

Claim 24. (Previously presented) The oil-in-water emulsion of claim **23** wherein the osmolality adjusting agent is anhydrous glycerol.

Claim 25. (Previously presented) The oil-in-water emulsion of claim **1** further comprising a sufficient amount of an antioxidant to prevent oxidation of the emulsion.

Claim 26. (Previously presented) The oil-in-water emulsion of claim **25** wherein the antioxidant is α -tocopherol.

Claim ~~26~~ 27. (Currently amended) The oil-in-water emulsion of claim **1** wherein the emulsion comprises up to about 5 % (w/v) derivatized polyethylene glycol or polyethylene glycol-linked lipid.

Claim 27. **28.** (Currently amended) The oil-in-water emulsion of claim **26 27** wherein the derivatized polyethylene glycol or polyethylene glycol-linked lipid comprises between about 0.1 and 30 mole percent of the monolayer components.

Claim 28. **29.** (Currently amended) The oil-in-water emulsion of claim **26 27** wherein the derivatized polyethylene glycol or polyethylene glycol-linked lipid is selected from the group consisting of MPEG-linked phosphatidylethanolamine, MPEG-2000-1,2-distearoyl and MPEG-2000-1,2-dioleoyl phosphatidylethanolamine.

Claim 29. **30.** (Currently amended) The oil-in-water emulsion of claim **26 27** wherein the derivatized polyethylene glycol or polyethylene glycol-linked lipid is methoxy polyethylene glycol having a molecular weight between about 1000 and 6000.

Claim 30. **31.** (Currently amended) An oil-in-water emulsion comprising:

- a) up to 50% (w/v) lipophilic core which is a pharmaceutically inert fat or oil of natural, synthetic, or semi-synthetic origin and a lipophilic contrast agent or radiopharmaceutical or lipophilic derivative of a water-soluble contrast agent or radiopharmaceutical;
- b) up to 10% (w/v) phospholipid emulsifier;
- c) up to about 5% (w/v) cholesterol;
- d) up to 5 % ~~derivitized~~ derivitized polyethylene glycol or polyethylene glycol-derivative of a phospholipid (w/v);
- d) up to 5% (w/v) of osmolality adjusting agent;
- e) optionally, up to 1 % antioxidant;
- f) the remainder being water, suitable for parenteral administration.

Claim 31. **32.** (Currently amended) The oil-in-water emulsion of claim **30 31** wherein the lipophilic contrast agent or radiopharmaceutical or lipophilic derivative of a water-soluble contrast agent or radiopharmaceutical is a polyhalogenated triglyceride.

Claim 32. **33.** (Currently amended) The oil-in-water emulsion of claim **30 31** wherein the lipophilic contrast agent or radiopharmaceutical or lipophilic derivative of a water-soluble contrast agent or radiopharmaceutical is an aliphatic ester of a water-soluble contrast agent.

Claim 33. **34.** (Currently amended) The oil-in-water emulsion of claim **32 33** wherein the aliphatic ester of a water-soluble contrast agent is selected from the group consisting of aliphatic esters of iopanoic, diatrizoic, and acetrizic acid.

Claim 34. **35.** (Currently amended) The oil-in-water emulsion of claim **33 34** wherein the aliphatic ester is selected from the group consisting of ethyl iopanoate and butyl iopanoate.

Claim 35. **36.** (Currently amended) An oil-in-water emulsion comprising:

- a) between 10% and 50% (w/v) of a pharmacologically inert triglyceride and a polyhalogenated triglyceride wherein the molar ratio of pharmacologically inert triglyceride to polyhalogenated triglyceride is in the range of 0.1:1 and 2:1 (w/w);
- b) up to about 9.9 % (w/v) phospholipid comprising dioleoylphosphatidylcholine and MPEG-linked phospholipid;
- c) up to 4.8 % (w/v) cholesterol, wherein the molar ratio of cholesterol to total phospholipid is in the range of 0.05 to 0.70;
- d) 5% (w/v) glycerol;
- e) 0.1-0.6 % α -tocopherol; and
- f) the remainder of the emulsion being water, the emulsion having a mean particle diameter of the oil phase between 50 to 150 nm with at least 98% of the particles being between 50 to 250 nm.

Claim 36. **37.** (Currently amended) The oil-in-water emulsion of claim **35 36** wherein the molar ratio of pharmacologically inert triglyceride and polyhalogenated triglyceride is 1:1.

Claim 37. **38.** (Currently amended) The oil-in-water emulsion of claim **35 36** wherein the amount of cholesterol is in the range of 0.4 to 0.5% (w/v).

Claim 38. **39.** (Currently amended) The oil-in-water emulsion of claim **37 38** wherein the molar ratio of cholesterol to total phospholipid is 0.4.

Claim 39. **40.** (Currently amended) The oil-in-water emulsion of claim **35 36** wherein the polyhalogenated triglyceride is a lipophilic diagnostic agent selected from the group consisting of iodinated arylaliphatic triglyceride analogs having a 1,3-disubstituted triglyceride backbone with a 3-substituted 2,4,6-triiodophenyl aliphatic chain or a monoiodophenyl aliphatic chain.

Claim 40. **41.** (Currently amended) The oil-in-water emulsion of claim **39 40** wherein the polyhalogenated triglyceride is 2-oleoylglycerol-1,3-bis[7-(3-amino-2,4,6-triiodophenyl)heptanoate].

Claim 41. **42.** (Currently amended) The oil-in-water emulsion of claim **39 40** wherein the polyhalogenated triglyceride is 2-oleoylglycerol-1,3-bis[4-(3-amino-2,4,6-triiodophenyl)butanoate].

Claim 42. **43.** (Currently amended) The heat stable hepatocyte-selective oil-in-water emulsion of claim **31 32** wherein the polyhalogenated triglyceride is a 1,2,3-trisubstituted triglyceride backbone with a 3-substituted 2,4,6-triiodophenyl saturated or unsaturated aliphatic chain or a monoiodophenyl aliphatic chain.

Claim 43. **44.** (Currently amended) The oil-in-water emulsion of claim **35 36** wherein the polyhalogenated triglyceride is a fluorinated triglyceride.

Claim 44. **45.** (Currently amended) A method of computerized tomographic imaging comprising the steps of:

- a) administering an imaging amount of the oil-in-water emulsion of claim **35 36** to a mammal wherein the oil-in-water emulsion contains a computerized tomography imaging agent; and
- b) when the imaging amount of the oil-in-water emulsion has reached the site to be imaged, carrying out computerized tomographic imaging of the site.

Claim 45. **46.** (Currently amended) A method of treating a living being in need of treatment comprising the step of administering an effective amount of the oil-in-water emulsion of claim 1 which contains a therapeutically active lipophilic agent or a lipophilic derivative of a water-soluble agent.

Claim 46. **47.** (Currently amended) A method of computerized tomographic imaging comprising the steps of:

- a) administering an imaging amount of the oil-in-water emulsion of claim ~~35~~ **36** to a mammal wherein the oil-in-water emulsion contains a computerized tomography imaging agent; and
- b) when the imaging amount of the oil-in-water emulsion has reached the site to be imaged, carrying out computerized tomographic imaging of the site.

Claim 47. **48.** (Currently amended) A method of making a blood pool selective oil-in-water emulsion comprising the steps of:

- (a) preblending the lipophilic components of an oil-in-water emulsion including nonpolar lipids, polar lipid emulsifiers, and other lipophilic components to form a premixed lipid phase;
- (b) homogenizing the premixed lipid phase and aqueous components to form a crude oil-in-water emulsion; and
- (c) subjecting the crude oil-in-water emulsion to ultra high energy mixing to produce a fine oil-in-water emulsion having a mean particle diameter of the oil phase between 50 to 150 nm with greater than 98% of the particles being less than 250 nm.

Claim 48. **49.** (Currently amended) The method of claim ~~47~~ **48** comprising the further step of:

subjecting the fine oil-in-water emulsion to sequential filtering.

Claim 50. (New) A surface-modified lipoprotein-like oil-in-water emulsion having a lipophilic core surrounded by a monolayer of amphiphilic or polar lipids, in a non-ionic aqueous phase, the emulsion having a mean particle diameter of the oil phase of between 50 to 150 nm with at least 98% of the particles being between 50 to 250 nm, the lipophilic core comprising at least one triolein moiety which is diagnostically or therapeutically active or inactive, and the monolayer components comprising dioleoylphosphatidylcholine, MPEG-2000-1,2-dioleoyl phosphatidylethanolamine and cholesterol.